PDA's are in widespread use in the USA including many people in medicine. There are literally thousands of software applications available and over 100 for use in medical practice.

Within the Indian Health Service there are some folks who are quite electronically advanced or literate and are utilizing these to help organize their lives and enhance their professional and clinical practice.

There are multiple options to choose from ...

- different companies
 - o Palm
 - Handspring
 - o Hewlett Packard
 - o Compaq
 - o Sony
 - o Blackberry
- different operating systems
 - o palm O/S
 - o Win CE

0

- different levels of RAM
 - o 8 MB is essentially standard
 - o 16 MB is becoming more and more available at a lower cost
 - o 32 MB 64 MB is becoming more common
- expandability
 - o almost all new PDA units come with this ability
 - o question may be --- in 1-2 years if/when additional memory is needed whether it will be cheaper to replace with new units almost certain to have enhanced basic memory -- or to buy the expansion memory at that point
- Color
 - o appears to be a bit of a luxury at some cost
 - o not clear how color is functionally beneficial
 - o demand for color may drive this into more basic units at a less cost
- Wireless capability
 - o is offered on the more expensive models
 - o questionable value at present --- but may have important ramifications for future interactions with RPMS
- Government Pricing
 - o None of the PDA's are on GSA pricing this is understandable because ...
 - the competition is fierce with very small profit margins
 - prices are dropping so quickly that the process of GSA contracting is unlikely to be able to keep pace

Summary of Options

Interestingly – just in time for the Holidays in 2001 --- this advertisement was seen ...

PDAMD.com to Offer Medical Starter Kit™ with the Handspring Visor™ Deluxe, Providing Healthcare Professionals with Indispensable Handheld Solution

The PDAMD.com Medical Starter Kit is designed exclusively for healthcare professionals and students who want to add efficiency and organization to their practices. The kit is immediately available from PDAMD.com's website (http://www.pdamd.com) for just \$249.00, a savings of over \$140.00 off the retail price. Customers will also be able to purchase 8 MB Memory Modules from PDAMD.com.

And this was the pricing scheme at that time, with new prices Feb, 2002 in red ...

Suggested Retail Price in DECEMBER 2001	\$299	\$249 Now \$199	\$299 Now \$249	\$199	\$129 no longer available
	Prism	Edge	Pro	Neo	Deluxe
Memory	8MB	8MB	16MB	8MB	8MB
Display	16-bit (65,536 colors) -Active matrix -Backlit -160 x 160 pixels	- High-Res B&W - 4-bit grayscale - Backlit - 160x160 pixels	- High-Res B&W - 4-bit grayscale - Backlit - 160x160 pixels	- High-Res B&W - 4-bit grayscale - Backlit - 160x160 pixels	- High-Res B&W - 2-bit grayscale - Backlit - 160x160 pixels
Color	Cobalt Blue	Metallic Silver, Blue, Red	Silver	Silver	Graphite, Blue, Ice
Battery Type	Lithium-ion (rechargeable)	Lithium-ion (rechargeable)	Lithium-ion (rechargeable)	2 AAA	2 AAA
	2 weeks on one charge, 6 hours continuous use	Approx. 4 weeks on one charge	Approx. 4 weeks on one charge	Approx. 2 months	Approx. 2 months
Operating System	Palm OS 3.5.2H	Palm OS 3.5.2H	Palm OS 3.5.2H	Palm OS 3.5.2H	Palm OS 3.1
Processor	33 MHz Motorola Dragonball VZ	33 MHz Motorola Dragonball VZ	33 MHz Motorola Dragonball VZ	33 MHz Motorola Dragonball VZ	16 MHz Motorola Dragonball VZ
Expandable	Yes (optional Springboard modules)	Yes (optional Springboard modules with detachable Springboard expansion slot)	Yes (optional Springboard modules)	Yes (optional Springboard modules)	Yes (optional Springboard modules)
Weight (w/ batteries)	6.9 oz	4.8 oz with metal stylus	5.7 oz	5.4 oz	5.4 oz
Size	4.8" x 3.0" x 0.8"	4.7" x 3.1" x .44"	4.8" x 3.0" x 0.7"	4.8" x 3.0" x 0.7"	4.8" x 3.0" x 0.7"

Best-Selling PDA/Handhelds

Handspring Deluxe Graphite 8MB Glenayre Bundle



Mfr : Handspring Inc. Item #:PDA1182

Palm m505 Organizer with 8MB Memory Color



Mfr : Palm Inc. Item #:PDA1136

More Info Add to Cart

\$399.00

More Info

Add to Cart

\$109.00

Palm m105 Organizer W/8MB Memory Mono



Mfr : Palm Inc. Item #:PDA1118

Compaq iPaq H3760 206MHZ 64MB Color Pocket PC 2002



Mfr : Compaq Commercial Item #:PDA1170

More Info Add to Cart

\$149.00 More Info

Add to Cart

\$499.00

Palm m125 Organizer 8MB SD/MM Slot Mono



Mfr : Palm Inc. Item #:PDA1163 HP Jornada 567 64MB CF I Pocket PC 2002



Mfr : Hewlett Packard Item #:PDA1164

More Info Add to Cart

\$199.00 More Info

Add to Cart

\$599.00

Sony Clie T415/S 8MB Mono Palm OS 4.1



Mfr : Sony Electronics Inc.

Item #:PDA1177

PDA Handspring Visor Prism 8MB Color



Mfr : Handspring Inc. Item #:PDA1108

More Info Add to Cart

\$249.00

More Info Add to Cart

\$299.00

On the Handspring Web-Site ---- you'll see this kind of comparison with all the other PDA's on the market --- this is just one example

	Visor Prism	Palm m505
Operating System	PalmOS®	PalmOS ®
Flexible plug-and-play expansion	Yes (optional Springboard modules)	No (content and storage only)
Built-in Microphone	Yes	No
Product Color	Cobalt Blue	Arctic Mist
Supports thousands of software applications	Yes (runs PalmOS software)	Yes (runs PalmOS software)
Infrared port	Yes	Yes
Macintosh compatible out-of-box	Yes	Yes
Fast and easy USB synchronization	Yes (USB native, up to 4x faster than a serial connection)	Yes (USB native, up to 4x faster than a serial connection)
Included organizer applications	-Standard Palm Apps -Advanced Calculator -Date Book Plus -CityTime world clock	-Standard Palm Apps -Note Pad -Clock
Included PC applications	Palm Desktop with HotSync Manager	Palm Desktop with HotSync Manager
Included Accessories	Leather slipcase	Leather flap
Syncs to popular PIMS	Yes (including Outlook)	Yes (including Outlook)
Display	-16-bit (65,536 colors) -Active matrix -Backlit -160 x 160 pixels	-16-bit (65,536 colors) -Reflective, front-lit LCD -160 x 160 pixels
Battery type	Lithium Ion (rechargeable)	Lithium Polymer (rechargeable)
Battery life	2 weeks on one charge	3 weeks on one charge
Weight	6.9 oz	4.9 oz
Size	4.8" x 3.0" x 0.8"	4.5" x 3.1" x 0.5"
Memory	8 MB	8 MB

Better screen quality: The Visor Prism handheld uses an active matrix backlit LCD screen, so everything you see is crisp, bright and easy to read under normal indoor conditions. The reflective screen on the Palm m505 tends to produce images that are dark and dull when compared to the Visor Prism handheld. Even the experts agree: "There is one big problem with Palm's new "m" series: the screen on the color model, the m505. It's so dim, dark and dull. At some angles, it's tough to tell the screen is even in color. And even with the backlight on, the m505's screen looks pallid and weak compared with the color display on Handspring's Visor Prism."

Walter S. Mossberg The Wall Street Journal

Greater Expansion Possibilities: The Springboard expansion slot was specifically designed to provide quick and powerful plug-and-play expandability for all Visor handhelds. Plug in a wireless modem and surf the Internet in brilliant color. Use a digital camera module to take full-color pictures and show them off to friends and family. You can already choose from over 40 exciting Springboard expansion modules. Palm m505's Secure Digital technology was originally designed for memory backup and not for handhelds. As such, its offerings are currently limited to memory and content cards.

Exclusive Features: Visor Prism handheld uses the same popular Palm OS®, but adds a series of enhanced applications. Now you can find the time in any country with the CityTime world clock, solve complex math equations with the Advanced Calculator and stay even more on task with our enhanced calendar, Date Book Plus. **Built-in Microphone:** Visor handhelds are the only PalmOS-based handhelds to include a built-in microphone for Springboard modules that use voice (such as VisorPhone, voice recorders, etc.).

More Colors: Visor Prism displays over 65,000 colors. Compaq iPAQ's color screen displays only 4,096 colors. **Expandability:** Visor Prism's built-in Springboard slot allows you to expand the benefits of color beyond just software, allowing full plug-and-play hardware expansion. Wireless, MP3, a digital camera and many more solutions are available today. Compaq iPAQ H3600 uses an additional expansion jacket (sold separately) which supports Compact Flash, PC cards, etc.

Popular Palm OS: Visor Prism is based on the popular Palm OS®, which is not only incredibly intuitive and easy to use, it also runs thousands of existing applications. Compaq iPAQ runs on Microsoft PocketPC with limited software applications available.

	PRISM	iPAQ
Operating System	PalmOS ®	Windows CE for PocketPC
Expansion	Springboard expansion slot enables plug-and-play modules	Expansion Jacket
Latest Palm OS® Processor Technology	Yes	N/A
Built-in Microphone	Yes	Yes
Supports thousands of software applications	Yes (runs PalmOS software	No (limited WinCE apps to date)
Infrared port	Yes	Yes
Macintosh compatible out- of-box	Yes	No
Fast and easy USB synchronization	Yes (USB native)	Yes (USB native)
Included organizer applications	-Standard Palm Apps -Enhanced Calculator -Enhanced Calendar -World Clock -Infrared Syncing	-Windows CE/Pocket Office apps -Compaq software bundle
Desktop software/PIM	Palm Desktop with HotSync Manager	Microsoft ActiveSync 3.1/Outlook 2000
Syncs to popular PIMS	Yes¹ (including Outlook)	No, just Outlook
Display	-16-bit (65,536 colors) -Active matrix -Backlit -160 x 160 pixels	-12-bit (4,096 colors) -Active matrix Reflective/frontlit -240 x 320 pixels
Battery type	Rechargeable Lithium Ion (internal)	Rechargeable Lithium Polymer (internal)
Battery life	2 weeks on one charge, 6 hours continuous use	12 hours continuous use
Weight	6.9 oz	6.3 oz
Size	4.8" x 3.0" x 0.8"	5.11" x 3.28" x 0.62"
Memory	8 MB	32 MB

Initial Expected Benefits in I/T/U sites – by introducing and using today

Essentially is a stand alone Reference tool for ...

A. Clinical information - multiple software options ...

these provide "quick practical clinical references" specifically made for PDA use in clinical situations – for efficiency

- ** NOT textbook, research, or academic level which are more time consuming and can be done via a library or better yet via the internet.
- 1. Overall "General medical practice" programs
 - a. Minute Clinical Consult (\$64.95)
 - b. Mini-Mental Status Exam (\$6.50)
- 2. Specific clinical programs
 - ** would allow or encourage end users to try these and provide feedback
 - a. Free 172 programs available at freewarepalm.com
 - e.g. STAT Cardiac Risk, STAT Growth Charts, STAT Cholesterol
 - b. Cost less than \$10 each
 - e.g. "Clinical" Endocrine, Ortho, ER, Neurology, Renal, etc.

B. Billing / Coding applications ...

1. E &M coding help programs

e.g. STAT E&M CoderTM

This easy-to-use interactive template finally makes the complex Evaluation & Management (E&M) coding process work to the clinician's advantage and will pay for itself on its first day of use (cost \$75 for 2 years). If you do any E&M documentation try it free of charge to see why users are giving it these great <u>reviews</u>. STAT E&M Coder™ is the gold standard recommended by coding professionals. Use either the HCFA 1995 or HCFA 1997 documentation format.

More Information Download Version 1.56 (Feb. 2002)

*** See Attachment #1 for Details at the end of this document

2. ICD - 9 coding help programs

STAT ICD-9 Coder is compatible with all <u>Palm OS handhelds</u>. Benefits:

- Rapidly code diagnoses as accurately and specifically as possible for appropriate billing, referrals, and radiology requests.
- Ensure that the appropriate complexity is represented in the diagnosis code
- Reduce billing-staff work and rework associated with incorrect coding
- Mitigate the effect of automatic downcoding software that looks for low-complexity diagnosis codes
- Contains all of the latest ICD-9-CM diagnosis codes. Coding tools that restrict the user choice of diagnostic codes are a known compliance risk for any organization. Read the March 2000 OIG report on medical billing software (pdf format).
- The code set used is HCFA ICD-9-CM Version 19 (October 2001 Update)

Pricing:

- <u>Demo this software</u> free of charge via download
- Purchase the licensed version for \$29 per user
- HCFA ICD-9-CM annual updates are currently \$12 available in the Fall

• Purchase online, download directly to your PC and install.

C. Pharmacy programs

- FREE
 - i. ePocrates Rx Clinical Drug Database (updated weekly)
- *** to appreciate the value of this log on to web site epocrates.com & take the tour
 - ii. ePocrates ID
- the fastest and most complete infectious disease application for Palm OS handhelds
- Quick Find antimicrobial treatment recommendations in five seconds or less without complicated cross-referenced tables
- Comprehensive Access concise yet complete information on over 400 bugs and 400 drugs
- Convenient Instantly search by location, bug, or drug using intuitive and easy-to-navigate formats
- Compatible Launch instantly from ePocrates ID^{TM} to ePocrates Rx^{TM} 4.0 and back for more comprehensive drug detail
- Compact Less than 450 K of memory leaves ample room for all your handheld applications
- 2. Purchase COTS products
 - a. Micromedix
- 3. Incorporate IHS or Service Unit formulary

D. Document readers

- 1. Quickword (\$19.95) (230 kb)
- 2. Quicksheet (\$29.95) (240 kb)
- 3. Quickoffice = both (\$39.95) (510 kb)

What does Quickoffice include?

Quickoffice includes our 3 award winning integrated applications, Quicksheet, Quickchart and Quickword, which operate on your Palm Handheld as well as the Quickoffice Desktop which effortlessly keeps your work synchronized with MS Word and Excel on your PC.



Quicksheet is the most powerful Spreadsheet available for PalmTM compatible handhelds. The only spreadsheet that meets Palm Powered Compatible Solution quality standards, Quicksheet synchronizes with Microsoft Excel effortlessly keeping your work up to date. Just this year, Quicksheet was named "Application of the Year" by VisorCentral.com and is rated by Geek.com as the "closest thing to Excel". [more...]



Quickword, our powerful word processor, puts full access to your "mission critical" MS Word documents on your Palm Powered™ handheld. With Quickword you can create documents complete with rich formatting whenever inspiration strikes. Read thousands of classic and contemporary e-books in Palm DOC format.

[more...]



Quickchart adds an important charting element to Quicksheet and contains five charting types: line, pie, scatter, bar and stock charts. Users can chart multiple series on the same grid and can view graphs in gray scale or in patterns.

[more...]

E. Specific Service Unit Organizational references

- a. phone lists
- b. clinical practice guidelines
- c. certain policies or procedures

F. Organizational aspects

- a. Interacts with Outlook email programs
- b. Phone messaging hotsync with Secretaries and other co-workers.

Future Benefits — looking ahead to 2003-2004 interactions with the RPMS database

- 2. bedside point of care data entry
- 3. wireless communication (substitute pager, cell phone)

Measures / Evaluation tools

Clearly – although advertising and medical use outside I/T/U settings of PDA's make use of PDA's seem rational, we would like a bit more evidence that PDA use actually does contribute to improved patient care.

See Attachment #2 -- a Draft questionnaire for Medical Providers --- an attempt to begin to evaluate and get information about PDA's in I/T/U settings that would help establish standards, recommendations, or support for national purchasing contracts.

Proposed Sites

- would like a variety of clinical settings
- probably a variety of users also
- 1. Whiteriver, AZ
 - a rural Hospital and Clinic
 - relatively young physician group, some using PDA's already
- 2. PIMC Emergency Department, Phoenix, AZ
 - Urban setting
- 3. Sante Fe, NM
 - a rural Clinic
 - Older physicians not currently using PDA's
- 4. Cherokee, NC
 - a rural Hospital and Clinic
 - already has some PDA's for use in a Patient Education Coding Project

STAT E&M Coder™ NUMBER OF DIAGNOSES OR Two year license: \$75 MANAGEMENT OPTIONS Registration eliminates the The number of possible "Registration Reminder diagnoses and/or the screen. Register with a number of management credit card via a secure web options that must be considered is based on the link at www.statcoder.com. It is important to provide number and types of the Palm Hotsync user name problems addressed during exactly because a unique the encounter, the Done Done)

Attachment #1

STAT E&M Coder is compatible with all <u>Palm OS</u> <u>handhelds</u>. As of July 2001, HCFA development of new E&M guidelines have been scrapped. No new

guidelines are in the works. The HCFA 1995 and 1997 guidelines currently used in STAT E&M Coder will be in effect for the foreseeable future. Read this link for more information.

Key Benefits

- Contains all HCFA organ-specific exams and all services in which HCFA guidelines are defined
- Ensures accurate coding
- Avoids template/checklist appearance of documentation
- Facilitates more efficient documentation it tells you what counts and what does not
- Provides feedback about documentation elements that may be lacking
- Is intuitive and easy to learn
- With experience, is actually needed less and less coding correctly becomes second nature
- Completely portable carried in your pocket on your <u>Palm OS handheld device</u>
- Low implementation costs pays for itself on the first day of use
- Proprietary, field-tested coding algorithms not found in any other software on any other device

Pricing

- Demo this software free of charge. It's fully functional for dozens of cycles.
- Registration is \$75 per user for a two year license. There are no other fees.

STAT E&M Coder helps clinicians to:

- Rapidly and accurately document all types of Evaluation & Management services
- Code to meet either HCFA 1995 or HCFA 1997 documentation guidelines
- Learn the type of documentation required for higher levels of service
- Utilize the components of any organ specific exam regardless of specialty
- Document more completely by prompting relevant history and exam points
- Ensure appropriate reimbursement while minimizing compliance risk
- Mitigate the effects of insurer's downcoding techniques by ensuring adequate documentation

Software Features:

- Runs on any Palm OS handheld device
- Uses only about 180K of Palm memory
- Single file download & install. No other programs or runtime engine are required.
- Only three or four input screens: History, Exam (1 or 2), and MDM
- Developed using Codewarrior, the same platform as native Palm OS applications, for the fastest execution and most robust user interface.
- Extensive text of the HCFA 1997 E&M coding documentation guidelines are included in the software
- Feedback in graphic form regarding what has been documented and, specifically, what has to be done to achieve a given coding/reimbursement level
- Detailed record-keeping is synchronized to a PC for audit purposes using the standard Palm OS memo function (see example below)
- Software may be installed and updated via infra-red beaming from one unit to another and conveniently registered via this web page.
- All instructions are found within the software itself. There is no external manual.

Attachment #2

PDA User Questionnaire – Medical Providers

GENERAL INFORMATION

1.	How long have you used a handheid device?				
0	Less than three months 3–12 months 1–3 years More than 3 years				
2.	Which handheld device are you using?				
	Handspring Visor Deluxe Pro Neo Prism other Palm m105 m125 m125 other other Compaq iPAQ other other other Other: other other				
3.	Overall, do you like the device?				
0	Absolutely YES Yes – it's OK Yes and NO NO				
4.	Did you have any problems learning to use the PDA?				
0	NO Some				
5.]	5. Did you have problems with battery life in your PDA?				
	NO – always holds charge between recharging Some – don't always remember to charge YES – doesn't last for entire workday/shift				

6.	Did you lose or break your PDA?
0	NO Lost or Stolen Broken NO, but left at home or misplaced at times.
7.	How often do you use the device?
0	Constantly Multiple times per day Now and then throughout the day Can go the whole day without turning on
8.	What was the biggest problem or headache or frustration you had with your PDA?
0	Too slow Awkward to use Screen too small Other:
8.	What is the PDA's best feature for you?
0	Too Slow Awkward Screen too small Other:
9.	Does the PDA/software save you time in clinical situations?
	YES – without a doubt Yes Maybe NO
10.	Does the PDA/software save you time in non-clinical situations?
	YES – without a doubt Yes Maybe NO

HANG IN THERE!!®

--- SOME MORE SPECIFIC INFORMATION

11.	1. How do you use your handheld device? (Please check all that apply.)			
	Address book/contact information		e-Prescribing	
	Calendar/appointments		Wireless access to the Internet or another network	
	Drug information look- ups/interaction checks		Charge capture	
	Formulary look-ups		Patient records	
	Pregnancy calculations		None of these	
	Treatment algorithms		Other (please specify)	
	Dosing calculations			
	ePocrates QID			
	Lexi-Drug Physicians! Drug Handbook			
	•			
	Other			
12. B. If you have downloaded a drug information application onto your handheld device, how often do you use it to look things up, such as dosing information, drug interactions, etc.?				
	More than twice a day			
	Once a day			
	A few times a week			
	A few times a month			
	Almost never			
	Not applicable; I have not downloaded a drug information application onto my handheld			

12.C. Approximately how many prescriptions a week do you write?

	None
	1–24
	25–74
	75–150
	151–200
	More than 200
	A. Which of the following clinical (non-Drug) software applications do you have loaded on ar device? (Please check all that apply.)
	5 Minute Clinical Consultant
	ACLS Protocols
	Clinical Practice Guidelines
	PregCalc
	Mini-Mental Status Exam
	None of these
	Other
	B. If you have downloaded a clinical information application onto your handheld device, v often do you use it to look things up, such as diagnostic information, treatment plans, etc.?
	More than twice a day
	Once a day
	A few times a week
	A few times a month
	Almost never
	Not applicable; I have not downloaded a drug information application onto my handheld
	A. Which of the following non-clinical software applications do you have loaded on your ice? (Please check all that apply.)
	Quicksheet
	Quickword
	None of these
_	

	B. If you have downloaded a non-clinical application onto your handheld device, how often you use it?
	More than twice a day Once a day A few times a week A few times a month Almost never Not applicable; I have not downloaded a drug information application onto my handheld
	For patient/clinical care in your practice situation – would you prefer to use software ograms on your handheld device OR programs like Up-To-Date via Internet access?
	PDA - without a doubt Internet – without a doubt
	Both – they are useful in different ways
SO	Other/Explain: — ORRY – A BIT MORE INFORMATION ABOUT YOU – Please©
16.	What best describes the setting in which you practice? Tribal Clinic Tribal Hospital/Clinic IHS Rural Outpatient Clinic IHS Rural Hospital/Clinic
	IHS Urban Outpatient Clinic IHS Urban Hospital/Clinic Emergency Room Setting Administration

	6–10 years						
	11–20 years						
	21–30 years						
	More than 30 years						
10	***	1.					
18.	What is your primary i	medi	cal specialty?				
	Allergy		Oncology				
	Anesthesiology		Ophthalmology				
	Cardiology		Orthopedics				
	Dermatology		Pediatrics				
	Emergency medicine		Psychiatry				
	Family practice		Radiology				
	Gastroenterology		Surgery				
	Internal medicine		Urology				
	Neurology		No specialization				
	Ob/Gyn		Other				
19. What is your age range?							
	Under 30						
	30–39						
	40–49						
	50–59						
	Over 60						
Any last comments or feedback – we failed to address in this questionnaire?							
			·				

THANKS SO SO MUCH © ©